

PROCEEDINGS
OF THE
NEW ENGLAND ZOÖLOGICAL CLUB

DESCRIPTIONS OF SIX NEW BUTTERFLIES FROM
BOLIVIA.

BY A. G. WEEKS, JR.

Ceratinia acceptabilis sp. nov.

Habitat : Coroico, Bolivia. Expanse : 2.45 inches.

Head black with a white dot behind each eye. The eyes are encircled by a fine white thread. Antennae black with bright yellow club. Thorax, above, black ; beneath, black with two transverse yellow lines. Abdomen, above, black ; beneath, light yellow. Legs black.

Fore wing, above, nearly all transparent with a blackish tinge. The transparent portion shows a mother-of-pearl lustre in some lights, as do all species of this genus. The costa and hind margin are bordered with black for one sixteenth inch, somewhat broader at apex. The inner marginal area, up to lower submedian nervule, is entirely black. The outer portion of discoidal space and the portion of interspaces adjoining it, down to lower submedian nervule, are transparent, but tinged with yellow instead of with black as the balance of the transparent portion is, giving the appearance of a broad yellow band crossing the wing. This band is scarcely perceptible on direct examination, but by turning the insect at an angle, it shows prominently. The nervures and nervules are black. The black of the nervule crossing the end of discoidal space suffuses slightly at its central portion, causing it to appear as a prominent feature of the wing. Along the inner edge of the black hind marginal border is a series of very prominent interspacial white spots, running from costa, close to apex, down to the lower submedian nervule.

Upper side of hind wing has a broad hind marginal border of black one quarter inch wide. This extends from upper angle area to the lower submedian nervule, and then dwindles abruptly to a point at anal angle. In its

centre, downward from costa, is a series of five interspacial white spots, a continuance of the line of white spots of fore wing. The central portion of the wing is transparent with a yellow tinge, the portion touching hind marginal black area being transparent with a blackish tinge. The nervures and nervules of this transparent area are bright yellow at its centre, turning to black outward. The anal angle and inner marginal areas are bright tawny up to the lower submedian nervule. This bright tawny area is the prominent feature of the coloring of the upper surface.

The under side of both wings is the same as upper surface, except that there is a dash of yellow on the costa of hind wing, running one quarter inch upward from the base.

Taken in May, 1899. It resembles closely *C. praxilla* Hew.

Taygetis puritana sp. nov.

Habitat: Bolivia, near Coroico. Expanse: 3.00 inches.

Head, thorax, abdomen and legs, dark brown above and beneath. Antennae a shade lighter with small dark annulations at base of each joint. Club black above and beneath.

The entire upper side of both wings is dark brown. In a very strong light there is some lustre in basal areas. The hind margins have a white interspacial border, quite prominent.

Under side of fore wing light brown, much lighter than upper surface. The prominent marking is a broad band of darker shade crossing centre of wing and extending across lower wing also. The basal area is light brown. A soft dark brown line or band crosses centre of discoidal space, extending to inner margin, but nearer base after leaving discoidal space and more indistinct. The end of discoidal space is marked by a fine thread of the same color. Running from costa, one quarter inch outside from discoidal space, is a line of dark brown ending at submedian nervure. The area between this line and discoidal space is darker than ground color, being darkest at the line and shading to lighter baseward. Outside of this line is an area of brighter brown, bordered one quarter inch inside of hind margin by a jagged dark thread. Through the centre of this area, from costa to inner margin, is a series of six interspacial white dots surrounded by dark brown. The hind margin is bordered by a white thread.

The under side of hind wing is of same ground color as of fore wing, the band of fore wing being somewhat more prominent. The inner edge of this band is bordered by a dark line running from costa, one third inch from base, and ending near centre of inner margin. The line bordering outer edge ex-

tends from centre of costa to end of discoidal space, turning there toward inner margin, and ending one third inch above anal angle. The outer portion of the wing duplicates the fore wing except that the spots are only five in number and are much more prominent.

Taken in May, 1899.

***Caligo gerhardi* sp. nov.**

Habitat: Bolivia, Cochabamba district. Expanse : 4.40 inches.

Head and collar dark fulvous. Eyes brown. Palpi and legs fulvous. Antennae dark fulvous, lighter beneath with a slight black annulation at base of each joint. Thorax dark mouse color above, fulvous beneath. Abdomen the same, but whitish on the sides.

The general ground color of the upper surface is a rich regal purple.

Costa of fore wing dark mouse color, generously covered with fulvous scales. Hind margin bordered with fulvous, a quarter inch deep at apex and lessening downward, disappearing at fourth median nervule. Within this the border is dark mouse color, three eighths of an inch wide, edged toward base with a broad jagged line of slightly lighter hue. At apex are three small white spots. The rest of the wing is regal purple, except a portion near base which is dark mouse color.

The hind wing is the same. The hind marginal space, to the third median nervule, is light grayish brown, and bordering this nervule, half an inch above anal angle, is an elongated dead yellow spot about one third of an inch long. The dark mouse-colored space near base is covered with long nearly black hairs.

The under side, owing to many irregular jagged black lines, etc., is difficult to describe.

The under side of fore wing has a broad light fulvous border, nearly half an inch wide. In the centre of this, extending from apex to lower angle, are two jagged black or brownish lines one eighth of an inch apart, bordered on outer side with a bit of fulvous a shade lighter than the ground color. The costa is mouse color, covered generously with light fulvous scales. On inner edge of the marginal border the three apical white spots appear, bordered on marginal side with a dash of rich brown, which is black, however, at upper spot. In the space below is a small oblong ocellus, having four minute white dots on a black ground and all surrounded by a line of light fulvous. In the space below this is another smaller ocellus, one sixteenth of an inch in diameter, of similar coloring. These ocelli do not show on upper side. Inside of the light fulvous border is a space of varying width, one third to one half inch, with a linear border of blackish brown, transversely crossed by a mass of ful-

vous wavy lines. This space is narrowest opposite discoidal space, broadening out toward costa and inner margin. Inside of this, and extending from costa through outer point of discoidal space, is a space of light fulvous, three eighths of an inch wide, jaggedly bordered by a darker line and dusted somewhat on inner side with silver scales. The discoidal space is crossed by a silver line about a quarter inch wide at costa and narrowing somewhat toward inner margin which it meets at right angles. This line, extending as it does across the hind wing, is the prominent feature of the lower side. In the centre of this silver band, beginning at the costa, is a black jagged thread, leaving it at the centre of the discoidal space and extending to the median nervule. The area on basal side of this silver band is dark fulvous with one black thread running down from costa, and, when midway, turning toward the silver band. The lower interspaces are suffused with black toward the base. The outer portion of discoidal space contains two oblong black-edged figures and another below them, circular in shape and lighter in color.

The hind wing has no defined border, the entire outer half being of light fulvous transversely crossed with a mass of wavy blackish lines. Under the costa, midway from base to apex, is a fulvous ocellus, one quarter inch across, bordered by a black thread and inclosing a half moon of minute white specks. There is another similar ocellus just below discoidal space, having, however, a yellow line within the outer black thread, and a heavy dusting of dark blue scales at lower edge. The silver band of fore wing extends across the discoidal space, terminating at the third median nervule. The outer portion of discoidal space is crossed by several irregular black threads. The space within the silver band is identical with the outer portion of the wing.

This superb specimen was taken September 12, 1899, by my collector, Mr. William J. Gerhard, and I take pleasure in naming it after him. It differs from others of this genus in that the lower ocellus of hind wing beneath is single, and the general coloring of under surface is quite different.

Nisoniades menuda sp. nov.

Habitat: Bolivia. Expanse: .75 inch.

Head, thorax, abdomen, antennae and legs, above, very dark brown, nearly black; beneath, the same, except that the antennae are lighter.

Upper surface in general appearance closely resembles *N. icelus* Scudd., and *N. brizo* Bsd.-Lec.

Upper surface of fore wing dark brown, nearly black. Hind margin has a border of somewhat lighter color tending to grayish, one eighth inch wide. Running down the central portion of this border is a thread of ground color. Within this, near apex and downward from costa, are three or four subcostal dots of same color. Extending from costa downward across end of discoidal space, is a band of same color, ending at submedian nervure. There is also a band near base, running from median nervure to submedian nervure. These markings are so indistinct that it is hard to locate and describe them.

Upper surface of hind wing is much the same, the marginal border being less prominent. The hind marginal fringe is lighter than ground color.

Under side of fore wing of the same ground color as upper surface, the basal and central portion showing blacker. Inner marginal area light brown.

Under side of hind wing of the same ground color as fore wing. There are no markings. The anal angle area is dusted slightly with light scales extending upward toward base and also along hind margin. Marginal fringe, of ground color.

Described from a series of specimens taken five days' travel north from Cochabamba about August 25, 1899.

***Cystineura aurantia* sp. nov.**

Habitat: Bolivia, near Coroico. Expanse: 1.65 inches.

Head nearly black, grayish underneath. Palpi black, grayish underneath. Antennae black with white annulations at base of each joint. Club black with orange tip. Legs gray. Thorax black with gray hairs. Abdomen black above, gray beneath.

General ground color of upper surface is white with orange and dark brown markings.

Costa of fore wing dark brown. Hind margin slightly dentated, a slight thread of white at edge, and within this a narrow margin of dark brown dentated on inner side. The entire fore wing may be divided equally among three colors, orange, white, and dark brown. The orange covers the outer third, covering the apical space and narrowing to a point at lower angle. The white area covers the central portion, starting at inner margin, from lower angle to a point one quarter inch from base and narrowing as a triangle to a point on costa one third distance from apex to base. The upper portion of this white area is represented by four white interspatial dashes running downward at right angles to costa and then broadening out and occupying nearly all of the lower interspaces. The discoidal space and costal space above, also

the adjoining portion of the four lower interspaces, are dark brown, excepting a slight white dash in discoidal space, extending from outer end and running toward base. There is another smaller dash above it, and also a very prominent triangular white mark, one quarter inch long, with its base at end of discoidal space, extending toward hind margin. The entire brownish area is lightened by a scattering of grayish scales, thickest near base.

Hind margin of hind wing dentated, and edged by a white thread. The border of hind margin is nearly black, and just within the edge is a series of interspatial half moons of blue. The basal area is brown. The rest of the wing is white, excepting a band of brown running transversely across centre of wing.

Under side of fore wing has same markings as upper side, but the brown is replaced by orange. There is also an irregular white line running from base to end of discoidal space.

Under side of hind wing is the same as upper side, except that the brown is replaced by dark orange dusted with blackish scales, and the white portion, while fully as prominent, is more restricted in its area. The half moons at hind margin are white instead of blue.

In some specimens the brown portions are so heavily dusted with white scales that they appear gray, while in others there is almost an entire absence of this dusting. The orange apex of fore wing contains in some specimens one or two white interspatial dashes.

Described from twenty-three specimens taken on the mountains near Coroico in May, 1899.

***Thymeles bridgmani* sp. nov.**

Habitat: Bolivia. Expanse: 1.90 inches.

Head blackish brown, the hairs having a slight greenish tinge. Palpi, above, blackish brown; below, yellowish gray. Antennae black. Club, above, black; below, yellowish. Thorax and abdomen blackish brown, covered with hairs of a greenish tinge. Legs dark brown with distinct yellow annulations at base of each joint.

Upper side of fore wing dark brown, the basal area covered with greenish hairs. In subcostal interspaces, midway from base to apex, are two small white marks. Below these and covering outer portion of discoidal space is a large semi-transparent white mark. Below this, in interspace below median nervure, is a still larger similar mark crossing entire interspace, concave on both sides. In the interspace above this and nearly touching these two large

spots is a smaller one, concave on outer edge. There is also another under the lower submedian nervule. The markings are in a line drawn from centre of costa to lower angle, and give the appearance of a band crossing the wing. Midway between this and apex is a series of four small subcostal white spots, running toward upper portion of hind margin. The two interspaces below are crossed by a white line nearly under the spots but a little nearer the margin and parallel to it. Hind marginal fringe, of ground color.

Upper side of hind wing dark brown, somewhat richer than fore wing. Basal area covered with greenish hairs. The hind marginal fringe is pronounced and pure white in color. The anal angle area extends downward, forming a short tail about one quarter inch long.

Under side of fore wing nearly identical with upper side. The costa near base is slightly dusted with yellow scales. There are very short indistinct greenish hairs in basal area. The inner marginal area, nearly up to lower submedian nervule, is light brown. Under the lower spot of the semi-transparent band and at lower angle is a spot or dash of very light brown. Marginal fringe, of ground color.

Under side of hind wing rich dark brown, dusted very slightly with yellow scales. The basal area has hairs of a greenish tinge. One quarter inch above the anal angle is a line of yellowish white, running from submedian nervure toward apex and ending at lower submedian nervule. It is about one quarter inch long only, but forms the only feature of hind wing. The hind marginal fringe is prominently white, as on upper side.

Taken five days' travel north from Cochabamba in August, 1899. A specimen was found in the Hewitson collection, unnamed.